

About Neighborhood Electric Vehicles

A neighborhood electric vehicle (NEV) is 4-wheeled vehicle, larger than a golf cart but smaller than most light-duty passenger vehicles. NEVs are usually configured to carry two or four passengers, or two passengers with a pickup bed or other utility box that allows NEVs to function as single purpose vehicles such as fire trucks or ambulances.



NEVs are defined by the National Highway Traffic Safety Administration as subject to Federal Motor Vehicle Safety Standard (FMVSS) No. 500 (49 CFR 571.500). Per FMVSS 500, NEVs have 4 wheels, top speeds between 20 and 25 miles per hour, weigh less than 2,500 pounds (Gross Vehicle Weight Rating), and are defined as “Low Speed Vehicles.” While “Low Speed Vehicle” is technically the correct term, “NEV” has become the term used by industry and fleets to refer to passenger vehicles subject to FMVSS

500.

FMVSS 500 requires that NEVs be equipped with headlamps, stop lamps, turn signal lamps, tail lamps, reflex reflectors, parking brakes, rear view mirrors, windshields, seat belts, and vehicle identification numbers. About 35 states have passed legislation or regulations allowing NEVs to be licensed and driven on roads that generally are posted at 35 miles per hour or less.



While NEVs were initially used in gated communities, they have been increasingly used by the general public for transporting kids to school, shopping, and general neighborhood trips. NEVs are very cost-efficient, in terms of initial capital costs, fuel costs, and overall operating expenses.



In addition to the above uses, many federal, private, and public fleets are increasingly using NEVs at military bases, national parks, commercial airports, and for local government activities. NEVs are reducing petroleum use and simplifying fueling requirements by decreasing or eliminating the need for gasoline infrastructure. For federal fleets, NEVs can help the fleets comply with Executive Order 13149 (Greening The Government Through Federal Fleet and Transportation Efficiency); which requires decreases in

annual petroleum.

Given the increasing use of NEVs, a California Air Resource Board (CARB) mandate providing NEV credits, that many of the large companies manufacturing automobiles in the United States have made investments to build NEVs, and the contribution NEVs make to decreasing petroleum use and air emissions, the Program initiated NEV testing in 2001.



The first step was to develop Baseline Performance test procedures based on the EVAmerica test procedures. These were adapted with active input from NEV manufacturers and fleet operators. The EVAmerica Baseline Performance test procedures require vehicle performance capabilities not part of the NEV specification FMVSS 500. For instance, NEVs are not capable of coast-down testing from 65 mph as preferred for calibration of the drive cycle dynamometer testing. The NEV EVAmerica procedures in final form included drive range, acceleration, and maximum speed tests on closed tracks.